

A Positive Stigma for Child Labor?

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Abstract: We introduce a simple empirical model that assumes a positive stigma (or norm) towards child labor that is common in some developing countries. We then illustrate our positive stigma model using data from Guatemala. Controlling for several child- and household-level characteristics, we use two instruments for measuring stigma: a child's indigenous background and household head's childhood work experience.

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1. Introduction

The conventional assumption on child labor stigma (or norm) is that households feel embarrassment, anxiety, guilt, or shame towards their children working (Grootaert and Patrinos, 1999). What about a situation where a different stigma prevailed? A positive stigma could approve of child labor, or at least it could approve of select forms of work of child labor (López-Calva, 2003). Indeed, households might take pride in a work in a household business or farm, especially if the child combines this work with schooling. Such a positive stigma of child labor has been identified among indigenous households in Guatemala, such that households value work not only as a tool for income, but as an activity worthwhile in its own right (Heckt, 1999). Guatemala's National Statistics Institute and the International Labor Organization (2003) conducted a series of interviews with Guatemalan households that elicited several comments emphasizing the role of child labor in indigenous communities:

“In general, (indigenous) leaders discussing child labor mixed together comments of an economic character with other comments on an educational character such as learning from one's father, the relation between learning and working, and being disciplined and respected. This is to say, the work of children is a way of training children to lead a responsible life... Work in household businesses was valued as having a role in education and training, incorporating the concept and practice of living. Values like honor, dignity, development and learning were expressed as connected to the work of children within a family atmosphere.”

In this paper, we introduce a simple empirical framework that assumes a positive stigma towards child labor that is common in some developing areas. We then illustrate our positive stigma framework using nationally representative data from Guatemala. In addition to child labor, we examine households preferences towards schooling.

2. Methodology

Child labor is typically associated with exploitation, overwork and deprivation of health and education. Child labor, however, can also be of a relatively benign nature, such as work on the family farm or family business, cleaning, cooking, fetching firewood and water, and taking care of infants, elders, and siblings. In reality, most of the world's child laborers engage in such relatively benign work for their own households (Edmonds, 2008). As discussed earlier, such forms of child labor is associated with a positive stigma among indigenous Guatemalans.

A large body of research has followed the seminal theoretical model of child labor by Basu and Van (1998). The underlying assumption in Basu and Van's model is that child labor is a bad in household preferences; thus, the model assumes a negative stigma of child labor in households, partly created by negative stigma of child labor in a community. A large share of empirical research based on a negative stigma of child labor have examined cases in Latin America, including Arends-Kuenning and Duryea (2006), Bando *et al.* (2005), de Janvry *et al.* (2006), Emerson and Souza (2007), Gunnarsson *et al.* (2006), Katz (1995), Krueger (2007), Levinson *et al.* (2001), Patrinos and Psacharopoulos (1997), Psacharopoulos (1997), Rosati and Rossi (2003), Schultz (2004), Skoufias and Parker (2006), and Wydick (1999). Consistent with the negative stigma model, this research conclude that low income forces households to practice child labor.

Of the existing theoretical research, only López-Calva (2002) has modeled a positive stigma of child labor. Briefly, the López-Calva model shows that households practice child labor despite income (or consumption) per household member exceeding a

subsistence level. By establishing an empirical model and using actual data, we complement López-Calva theoretical model.

Figure 1 illustrates a three stage model of positive stigma for child labor, with each reflecting the household's attitudes towards child labor.¹ Stage 1 assumes that households strongly prefer having their children combine work and schooling. If a household considers child labor to be an important form of learning, then the household might ensure that working does not prevent a child from enrolling in school or from doing schoolwork while enrolled. Furthermore, in communities with a positive stigma for child labor, forms of child labor may have evolved to become more compatible with schooling. We argue that this decision to combine child labor with schooling is the most preferred of all child activities, and is associated with the strongest positive stigma for child labor.

<Insert Figure 1 about here>

Stage 2 reflects cases where constraints prevent the household from having the child combine work and schooling. In this stage, the most preferred activity is schooling only; work only and being idle are less preferred activities. Stage 3 reflects cases where combining work and school or only attending schooling are not possible. The third most preferred activity is work only, implying that the least preferred activity is being idle (i.e., not engaged in work or schooling). Our model therefore indicates that though households have a positive stigma for child labor, they have an even stronger preference for schooling such that they are unwilling to give up school enrollment for child labor.

¹ In contrast, a negative child labor stigma model involves estimating the probability that attends school, followed by decisions of whether the child will work.

The probabilities for the three child activity choices according to a sequential probit specification are given by the following three equations (each of which is estimated separately using a progressively smaller sample of children):

$$(1) \quad P_1 = F\left(\sum_{k1}^{K1} \beta_{k1} X_{k1}\right)$$

$$(2) \quad P_2 = \left[1 - F\left(\sum_{k1}^{K1} \beta_{k1} X_{k1}\right)\right] F\left(\sum_{k2}^{K2} \beta_{k2} X_{k2}\right)$$

$$(3) \quad P_3 = \left[1 - F\left(\sum_{k1}^{K1} \beta_{k1} X_{k1}\right)\right] \left[1 - F\left(\sum_{k2}^{K2} \beta_{k2} X_{k2}\right)\right]$$

where equations (1), (2), and (3) refer to the probabilities at the first, second, and third stages; F represents the standard normal distribution function; the $k0$, $k1$, and $k2$ subscripts indicate the sets of X explanatory variables included in each stage. The estimation of the model simply involves a binary probit in each stage.²

Our first instrument of stigma is a household's indigenous identity because (as discussion earlier) qualitative evidence indicates that indigenous households value work for its own sake. Our second instrument of stigma is the household head's childhood experiences with work. We hypothesize that, *ceteris paribus*, adults with child labor experiences have a stronger preference towards child labor. As we discuss in the next section, the data is unusual because it asks whether adults worked as children. Therefore, our contribution is not only in establishing an empirical model, but also in the use of an unusual instrument for stigma.

3. Data and Results

² The sequential probit method overcomes the Independent of Irrelevant Assumptions (IIA) problem associated with multinomial logit estimation (where there are no rankings of children's activities).

Our data source is Guatemala's Living Standards Measurement Survey (ENCOVI) from the year 2000. Guatemala's National Statistics Institute carried out interviews for the nationally representative ENCOVI with 7,276 households, including 37,771 individuals of all ages from urban and rural areas. It is also one of Latin America's only surveys designed to be statistically representative of indigenous and non-indigenous people. Regrettably, we do not separately consider household work and paid work because the ENCOVI data reports a negligible share of children engaging in paid work, which raises estimation issues. We therefore collapse child laborers engaging in household work and paid work into one category.

Figure 2 illustrates that though child labor rates have fallen for both indigenous and non-indigenous populations, non-indigenous rates have fallen at a quicker rate. The lack of change in child labor among indigenous Guatemalans partly supports the positive stigma argument, but it may also reflect low socioeconomic status (and reliance on child labor) over time. We are unable to further investigate the role of socioeconomic status on changing child labor and education patterns across cohorts because the ENCOVI data does not have information on childhood socioeconomic status of adults. Accordingly, we focus on children for the remainder of this paper.

Table 2 presents descriptive statistics for all Guatemalan children in the 7 to 14 age-group. The rate of combining child labor and schooling—the most preferred activity in the positive stigma model—are 8.1 percent and 2.6 percent for indigenous and non-indigenous children. The rates of only schooling for indigenous and non-indigenous children are 63.3 percent and 81.5 percent. The rates of only working for indigenous and non-indigenous children are 4.1 percent and 1.1 percent. Lastly, the rates of being idle for

indigenous and non-indigenous children are 24.6 percent and 14.8 percent; the large share of idle indigenous children suggests that households are reluctant because of legal implications to report that their children are workers (Edmonds, 2008). Overall, 41.9 percent of all Guatemalan children are indigenous. The household heads of 83.6 percent of indigenous children and 72.1 percent of non-indigenous children worked as children. Not surprisingly, the household incomes of indigenous children are well below the incomes of non-indigenous children's households.

Table 2 presents the estimation results obtained from the positive stigma empirical model. Controlling for other observable factors, the first stage results indicate that being indigenous is associated with a strong likelihood for combining schooling and work over all other activities. Having a household head who worked as child is also associated with a greater likelihood of choosing combine rather than other activities. The second stage results also provide statistically coefficients for our instruments. However, the second stage results suggest that being indigenous and having a head who worked as a child lowers a child's likelihood of only engaging in schooling. In the third and final stage, only the coefficient on being indigenous is statistically significant, indicating that indigenous children are more likely than non-indigenous children to only work rather than be idle.

Table 3 presents the predicted probabilities of engaging in the various child activities by degree of stigma towards child labor. We denote strong positive stigma in a case where a child is both indigenous *and* has a household head who engaged in child labor. We denote medium stigma towards child labor if a child is either indigenous or has a head who worked as child. Lastly, we denote a weak (perhaps zero or negative) stigma

towards child labor if a child is not indigenous and has a head who did not work as a child.

<Insert Table 3 around here>

The predicted probabilities are estimated by assuming that all households have the same (mean) child- and household-level characteristics except being indigenous and a household head's past child labor experiences. A child in a household with strong positive stigma towards child labor has a 0.07 probability of combining work and schooling; this figure is higher than the 0.03 to 0.05 probability range found in a household with medium stigma, and higher than the 0.02 probability found in households with weak stigma. As expected, households with strong positive stigma have are less likely to choose schooling only, work only, and idle than households with lower levels of stigma.

4. Conclusion

We introduced a simple empirical model that assumes a positive stigma towards child labor, and provided an illustration using data from Guatemala. Our approach suggests that increasing schooling options or improvements in socioeconomic status may be insufficient to eliminate child labor in households with a positive stigma for child labor. Therefore, welfare programs that provide cash payments in exchange for children's regular attendance at school such as Mexico's Oportunidades (formerly PROGRESA), and other programs in Brazil, Honduras, Nicaragua are likely to have a modest impact on eliminating child labor (Das *et al.*, 2005).

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Table 1: Summary statistics, Guatemalan children between ages 4 and 14

	Indigenous	Non-Indigenous	All
<i>Children's activities</i>			
Combine	0.081 (0.272)	0.026 (0.159)	0.049 (0.215)
School only	0.633 (0.482)	0.815 (0.388)	0.739 (0.439)
Work only	0.041 (0.198)	0.011 (0.104)	0.024 (0.152)
Idle	0.246 (0.431)	0.148 (0.356)	0.189 (0.392)
<i>Child characteristics</i>			
Indigenous	1.000 (0.000)	0.000 (0.000)	0.419 (0.493)
Male	0.507 (0.500)	0.522 (0.500)	0.516 (0.500)
Age	10.33 (2.28)	10.36 (2.31)	10.35 (2.29)
Urban	0.284 (0.451)	0.458 (0.498)	0.385 (0.487)
<i>Household characteristics</i>			
Head child labor	0.836 (0.371)	0.721 (0.448)	0.769 (0.421)
Household per-capita income	5.888 (0.757)	6.618 (0.962)	6.313 (0.953)
Household size	7.585 (2.381)	6.774 (2.394)	7.113 (2.422)
Head male	0.863 (0.344)	0.836 (0.370)	0.847 (0.360)
Head age	43.02 (11.10)	44.13 (11.72)	43.67 (11.48)
Head primary education	0.486 (0.500)	0.695 (0.460)	0.608 (0.488)
Head secondary education	0.064 (0.245)	0.218 (0.413)	0.154 (0.361)
Head employed	0.902 (0.297)	0.870 (0.336)	0.884 (0.321)
<i>N</i>	3435	4768	8208

Source: ENCOVI 2000. Standard deviations appear in parentheses. Household income excludes child's income.

Table 2: Sequential probit estimation results

	Combine (P1)	School only (P2)	Work only (P3)
Indigenous	0.461** (0.055)	-0.117** (0.036)	0.458** (0.097)
Head child labor	0.154** (0.068)	-0.160** (0.045)	0.159 (0.132)
<i>Controls:</i>			
Male	0.351** (0.051)	0.137** (0.034)	0.332** (0.087)
Age	0.092** (0.011)	-0.062** (0.007)	0.180** (0.019)
Urban	-0.128** (0.060)	0.122** (0.040)	-0.031 (0.107)
Household per-capita income	-0.188** (0.050)	0.636** (0.035)	-0.273** (0.088)
Household size	-0.036** (0.016)	0.123** (0.011)	-0.050* (0.026)
Head male	-0.129 (0.080)	0.045 (0.054)	-0.169 (0.137)
Head age	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.004)
Head primary education	0.086 (0.057)	0.305** (0.037)	0.135 (0.095)
Head secondary education	0.009 (0.096)	0.159** (0.073)	-0.372 (0.303)
Head employed	0.190** (0.093)	-0.035 (0.059)	0.106 (0.153)
Constant	-1.819 (0.427)	-3.480** (0.287)	-1.875** (0.718)
<i>N</i>	8203	7803	1745
Pseudo R-squared	0.086	0.139	0.127

Source: ENCOVI 2000. Entries represent regression coefficients. Test statistics appear in parentheses. Household income excludes income from child's work. ** represents significance at 5 percent level; * represents significant at 10 percent level.

Table 3: Predicted probabilities of children's activity by level of positive stigma

Level of Positive Stigma	Combine	Schooling Only	Work Only	Idle
<i>Strong</i>				
Indigenous child, Head was child laborer	0.067	0.789	0.117	0.027
<i>Medium</i>				
Indigenous child, Head was not child laborers	0.049	0.833	0.089	0.029
Non-Indigenous child, Head was child laborer	0.025	0.822	0.050	0.103
<i>Weak</i>				
Non-Indigenous child, Head was not child laborer	0.017	0.860	0.035	0.088

Notes: (1) Horizontally, the probabilities sum to one. (2) These values assume that variables other than indigenous and head child laborer are at mean values.

Figure 1: A sequential model of positive stigma towards child labor

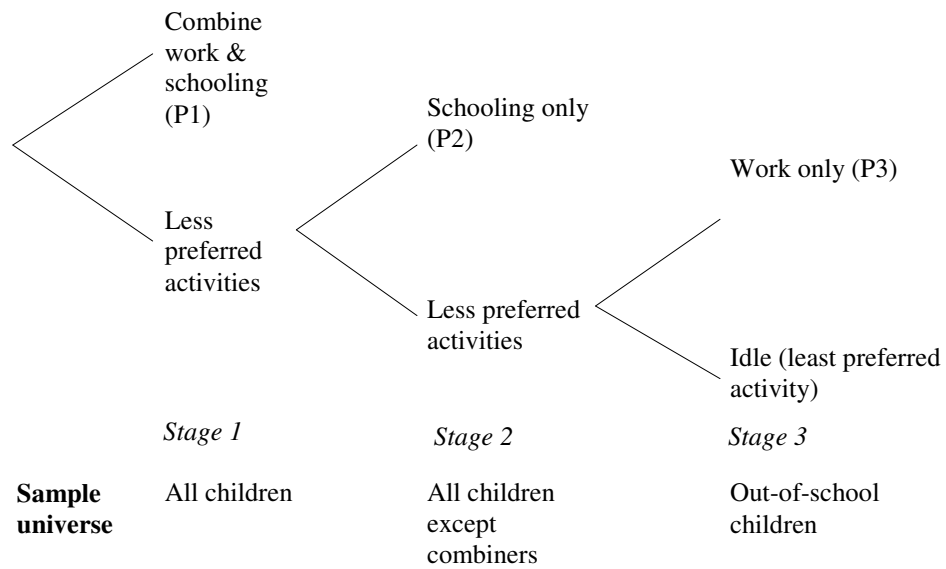
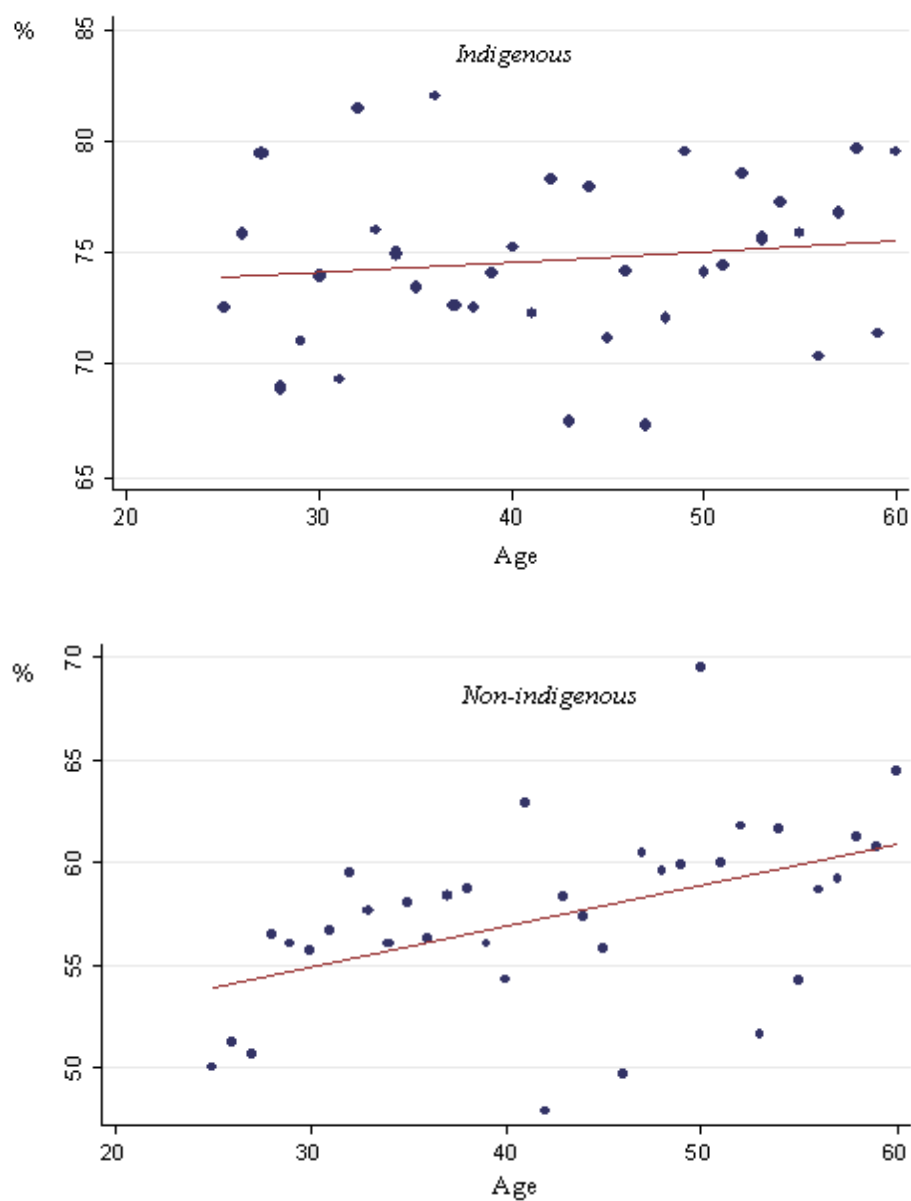


Figure 2: Percentage of adults that worked during childhood in Guatemala, age-cohort 25-60



Source: ENCOVI 2000.

Data points are weighted means of observations for indicated year. Lines are prediction of linear regression.